DOCUMENT RESUME

ED 133 849 EA 009 101

TITLE	A Guide for Planning and Construction of Public School Facilities in Georgia. Physical Education Facilities.
INSTITUTION	Georgia State Dept. of Education, Atlanta. Office of School Administrative Services.
PUB DATE	76
NOTE	36p.; For related documents, see EA 009 100-102
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Elementary Secondary Education; *Facility Guidelines; *Facility Requirements; Flexible Facilities; Gymnasiums; Locker Rooms; *Physical Education Facilities; Safety; Sanitary Facilities; *School Planning; Shared Facilities; Space Classification; Space Utilization
IDENTIFIERS	*Georgia

ABSTRACT

Recommendations are offered for an adequate physical education instructional program to be considered for all proposed construction in the state. Sizes and dimensions for indoor and outdoor facilities, at the elementary, middle, and high school level are provided, with specific recommendations for middle and high school gymnasiums. A concluding section concerns affirmative action in preventing litigation due to facility and equipment involvement. The appendixes contain bibliographies and suggested procedures for school boards to follow in sharing facilities with city/county recreation departments. (MLF)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

A Guide for Planning and Construction of Public School Facilities in Georgia

SCOPE OF INTEREST NOTICE

The ERIC Facility has assigned this documen: for processing to: EA SP

In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

Physical Education Facilities

SA 009 101

A GUIDE FOR PLANNING AND CONSTRUCTION OF PUBLIC SCHOOL FACILITIES IN GEORGIA

This publication is printed as a series of booklets. Titles included in the series are listed below.

Laws, General Policies and Procedures

Site Selection and Development

General Design and Construction Standards and Sanitation Design Criteria

Heating, Ventilating, Air Conditioning, Electrical and Lighting

Early Childhood and Elementary General Purpose Instructional Units

Middle School, Junior High and Senior High General Purpose Instructional Units

Administrative and Support Services Facilities

Media Center Facilities

Fine Art and Music Facilities

Auditoriums, Little Theater, Speech and Drama Laboratory

School Food Services Facilities

Science Facilities

Physical Education Facilities

Vocational Facilities I -- Home Economics and Distributive Education

Vocational Facilities II – Industrial Arts and Business Education

Vocational Facilities III – Trade and Industrial

Vocational Facilities IV – Agriculture

Specialized Instructional Units

Other Specialized Instructional Units

Furnishings and Equipment

A Guide for Planning and Construction of Public School Facilities in Georgia

Office of Instructional Services
Division of Curriculum Development
and Pupil Personnel Services
Georgia Department of Education
Atlanta, Georgia 30334
Jack P. Nix
State Superintendent of Schools
1976

Physical Education Facilities

FOREWORD

Winston Churchill is reported as saying that we shape our buildings, but thereafter they shape us. (Tunstall-Appendix F) This statement should be the underlying thought and guiding basis for school facility planning. Far too many physical education facilities are developed with inadequate planning and design study prior to construction. This guide has been prepared to assist local school personnel and design professionals in the planning and design process and should be helpful in the planning of physical education facilities. The need for sound planning of physical education facilities cannot be overemphasized.

This facilities guide is designed to offer recommendations for an adequate physical education instructional program and should be considered for all proposed construction. In the event funding is inadequate to provide the areas recommended, spaces may be scaled down appropriately to a minimum, workable layout.

This guide is a publication of the Georgia Department of Education. Information herein has been produced and compiled cooperatively by School Plant Services unit and the respective curricula and service components of the department of education.

CONTENTS

Foreword 2

General Planning Considerations 3

Efficient and Intensive Use of Facilities 3

Sizes and Dimensions 4

Specific Recommendations for Middle and High School Gymnasia 7

School Pool Requirements 12

Planning of Outdoor Hard Surface Areas 13

Planning of Outdoor Grass Areas 14

Affirmative Action in Presenting Litigation Due to Facility and Equipment Involvement 15

Appendices 17

GENERAL PLANNING CONSIDERATIONS

Some of the factors that must be considered in the planning of physical educational facilities for public schools are

- projection of the population;
- acquisition of land;
- consideration of long-range planning;
- provision of supplies, furniture and apparatus;
- determination of the type, number, size and relationship of the areas and facilities;
- flexibility, adaptability and expansibility of the planned facilities;
- and relationship to other areas of the school plant.

A careful study must be made of the needs to be met by the facility, and the objectives of the physical education program must be kept in mind during this planning. Factors that may influence decisions concerning facility needs and efficient usage are

- local and state mandates, policies and requirements;
- climate;
- daily programs or other plans which may call for alternate days with other subjects;
- maximum number of instructional units to be served in any one period;
- grade level of students to be served;
- student and community assessed needs and interests;
- size and scope of the intramural and interscholastic program.

In new projects, the physical education facilities should be an integral part of the total school plant, not an appendage. Whenever assembly and stage productions can be satisfactorily accommodated elsewhere, the gymnasium should be used intensively for physical education activities.

Where space is available, a school should have play areas marked with concentric circles, boundary lines and restraining lines painted a safe distance from walls and fences. Softball diamonds, courts of various kinds, jumping pits and take off boards are essential to a good physical education program.

EFFICIENT AND INTENSIVE USE OF FACILITIES

Idle facilities are hardly justifiable in the face of today's great need for utilization of such facilities by society for recreation and physical fitness. Because of the increased availability of leisure time, there is a need for facilities for adults as well as for youth, and the schools have an obligation to fill this need. In many cases, the expenses for constructing physical education facilities and outdoor play areas of a school require as much as one third of the total school plant expenditure. Considering this enormous expenditure, the physical education facilities should be utilized to maximum capacity at all

times. The feasibility and possibility of community use of the facilities shou'd receive high consideration.

The school can be a community bonding agent, and the coordination of the school program with the community recreation program can be a definite asset to any community. Use of common facilities and equipment which can be a saving to both agencies is the concept followed by the community school and park school programs. Many community programs can be continuations of the regular learning process, and the skills learned in regular school can be improved in the recreation program. For this type program to operate smoothly, there must be a tremendous amount of planning, problem solving and agreement of philosophy on the part of both agencies. There must be definite understandings as to funding, supervision, equipment use, care, maintenance, etc. These understandings must be spelled out in the agreement or contract between the agencies. The policies for such a program are usually set up by local boards of education and the proposed model, position paper and contractual arrangement offered as Appendix A-1 through A-5 can add to this multi-agency use which is made possible by Georgia School Law 32-1903. This law states

"32-1903 City, county and area boards authorized to employ supervisors and special teachers. County, city and area boards of education may employ supervisors and special teachers of physical education and health education in the same manner as other teachers are employed provided they possess such qualifications as the State Board of Education may prescribe. Boards of education of two or more school districts may jointly employ a supervisor or special teacher of health or physical education. Boards of education may allow the use of school buildings or school grounds after regular school hours and during vacations as community centers for the promotion of play and other healthful forms of recreation, under such rules and regulations as they deem proper. (Acts 1971, pp. 299, 300)"

SIZES AND DIMENSIONS

Suggested components and sizes included in this document were prepared to provide facilities for an adequate functional physical education instructional program as well as a high school interscholastic athletic program. The following suggestions are based on an elementary school (grades K-5) of 600 students, a middle school (grades 6-8) of 900 students and a high school (grades 9-12) of 1,500 students.

Requirements of the Georgia High School Association should be checked, and in the case of facilities to be used for interscholastic athletic competition, these requirements must be met.

Elementary School – 600 Students (grades K-5)

- *Indoor Area* – This area should contain at least 4,000 square feet of column free space. No one dimension should be less than 50 feet and the ceiling height should not be less than 21 feet. Folding seating should be provided on one side of the indoor area for 300 individuals. The following areas and recommended square footage are in addition to the above indoor area.

Shower area B (12 shower heads)	144 sq. ft.
Shower area G (12 shower heads)	144 sq. ft.
Storage area	300 sq. ft.
Dressing for boys	800 sq. ft.
Dressing for girls	800 sq. ft.
Boys restroom	72 sq. ft.
Girls restroom	72 sq. ft.
Teacher office (including shower)	120 sq. ft.

Note: *All areas described herein are net areas, and area for walls, partitions, chases, circulation and mechanical rooms should be added for total estimated area.*

- *Outdoor Hard Surfaced Areas* – Each area should include a recommended 2,400 square feet, and there should be two areas. No one dimension should be less than 40 feet. The surface should have markings which include large and small circles; straight lines; geometric shapes; maps; and multi use surface markings for four square, volley ball, shuffleboard, hop scotch, bat ball, circle soccer and kick ball.

  Portable goals, standards and nets for activities should be available. One basketball goal should be available for each six students to be served in the largest instructional group.

- *Outdoor Grassed Areas* – It is recommended these areas contain at least 90,000 square feet, and one area should be at least 225 feet by 225 feet. Goals, nets, standards and appropriate outdoor balance beams, climbing apparatus, uneven surfaces and bicycle paths should be provided. This area should include smaller areas with varying texture surfaces such as sand.

- *Fitness Area* – This area would include peg boards, confidence course, climbing ropes, overhead ladder, chinning bar, etc.

- *Outdoor Education* (Wooded and/or Natural Area) – This area should contain at least two acres and should offer opportunities for students to be involved in ecology, orienteering, conservation, camping, environmental investigations and gardening.

Middle School – 900 Students (grades 6-8)

- *Indoor Area* – This area should contain at least 12,200 square feet of column free floor surface with no one dimension less than 110 feet. Surface markings should include lines for basketball, volleyball, badminton, tennis, shuffleboard and one wall handball. The ceiling height should not be less than 22 feet, and folding seating should be provided on one side for 450 individuals. In addition to this large space, a storage area of at least 400 square feet of clear floor space should be located on the floor level. This storage area should have double (removable mullion) doors nine feet high. No dimension for this storage area should be less than 15 feet. The following designated areas and square footage are recommended.

Instructor office	200
Storage (including 400 feet adjoining main floor)	1,200
Locker B	1,200
Locker G	1,200
Shower B (20 heads)	400*
Shower G (20 heads)	400*
Health classrooms (2) 750 ea.	1,500
Boys restrooms	130
Girls restrooms	130
Laundry	200
Multi-purpose room (18-foot ceiling)	1,800

**Increase if modesty stalls are installed.*

Shower and locker rooms for both boys and girls should be based on 12 square feet per pupil (100 was the maximum number of students in any one period used for this guide.) Adequate toilet facilities for 100 students in one period should be included. Consideration should also be given to the fact that the intramural program may include more individuals than in a peak class period. Shower rooms are based on three to five students per head and a minimum of 20 square feet per

head. Example: 100 students, 20 shower heads, 400 square feet. If modesty stalls are used, the shower room square footage will have to be increased. One should keep in mind the Title IX requirements of equal dressing facilities for boys and girls when planning the shower, dressing and locker areas. It is desirable for both middle and high schools to provide laundry service for students. An area for this laundry should also be included in both the middle and high school physical education indoor facility plan.

Note: *All areas described herein are net areas and area needed for walls, partitions, chases, circulation and mechanical rooms should be added for total estimated area.*

- *Outdoor Hard Surfaced Area* – This area should contain at least 14,400 square feet with a recommended high chain linked fence surrounding the entire area. No one dimension should be less than 120 feet, and surface markings for four square, volleyball, one wall handball, tennis, badminton, shuffleboard and basketball should be provided. Bankboards for tennis should be on one fence or wall. This area may include three wall handball courts.

- *Outdoor Grassed Area* – These outdoor areas should contain at least 135,000 square feet of level surface. The total area may include two lots with a minimum dimension of 200 feet.

- *Fitness Area* – This area should include a designated area for pegboards, confidence course, climbing ropes, chinning bars and horizontal ladders.

  An outdoor cinder or composition track should be included and may encircle one of the outdoor grass areas. The standard one-fourth mile track is recommended for middle and high schools.

- *Outdoor Education Area* – This area should contain a minimum of four acres and should provide opportunities for students to be involved in ecology, orienteering, conservation, water studies, camping, boating and canoeing, environmental investigations and gardening.

High School – 1500 Students, (grades 9-12)

- *Indoor Surface* – The floor should be marked for basketball, volleyball, tennis, badminton, shuffleboard, one wall handball, paddle and basketball. The ceiling height should be a minimum of 24 feet. Folding seats for 1500 persons should be provided. The floor should contain at least 20,800 square feet of column free space. There should be 1000 square feet of storage space of clear floor area which has no dimension of less than 15 feet. The storage area should be on the main floor level and should include a nine-foot high double door with removable mullion. The following areas should be included.

Instructor offices including bath and shower	400 sq. ft.*
Laundry area	200 sq. ft.
Locker B	1,200 sq. ft.
Locker G	1,200 sq. ft
Shower B (20 heads) – Net area	400 sq. ft.
Shower G (20 heads) – Net area	400 sq. ft.
Multi-purpose room (at least 18-foot ceiling)	2,000 sq. ft.
Dance, wrestling classroom	750 sq. ft.

**includes two offices*

- *Outdoor Hard Surfaced Area* – 16,200 square feet. Areas should be lined off for tennis (with bankboard), shuffleboard, volleyball, basketball and badminton. Consolidation of areas results in economy; however, some unique plans may call for a single purpose area. The area should have a solid concrete wall 18-20 feet in height on one side. If this area is a part of a joint recreational and instruc-

tional program, there should be at least four hard surfaced tennis courts which are fenced and have solid areas for banking balls.

- *Outdoor Grassed Area* – The total area should be 150,000 square feet with no one area less than 250 feet by 250 feet.

- *Track* – This area should be a surfaced (cinder or composition) one-fourth mile track with at least six lanes.

- *Fitness Area* – This area should include pegboards, confidence course, horizontal ladder, chinning bars, climbing ropes, etc.

- *Outdoor Education and/or Natural Area* – Three acres

- *High School Athletic Facilities* – The interscholastic athletic program will require additional facilities and outdoor areas. These are

Storage (Outdoor large, overhead type door)	800 sq. ft.
Storage (indoor)	1,000 sq. ft.
Offices	400 sq. ft.
Training room	300 sq. ft.
Boys' dressing facilities and cages	1,000 sq. ft.
Boys' showers (additional 10 heads)	120 sq. ft.
Girls' showers (additional 10 heads)	120 sq. ft.
Girls' dressing facilities and cages	1,000 sq. ft.
Football stadium and playing field	300,000 sq. ft.
*Track (¼ mile)	
*Baseball field	
*Soccer playing field (football stadium)	
*Soccer and football practice field	
*Tennis courts (four)	
*Volleyball courts (two)	

**May be a part of existing facilities*

Note: *All areas described herein are net areas and area for walls, partitions, chases, circulation and mechanical rooms should be added for total estimated area.*

SPECIFIC RECOMMENDATIONS FOR MIDDLE AND HIGH SCHOOL GYMNASIA

In middle and secondary schools, the gymnasium is the main workshop of the physical education plant. It should be a large, well-ventilated and well-lighted room, suitable to the activities of the school and the community.

Location

The gymnasium should be located on the ground floor and have its own public entrance. The gym should be accessible to the playgrounds and the athletic fields, preferably without the need for using general school corridors. The gym should be located to minimize noise interference with quieter areas. It should also be possible to lock off other areas of the school after school hours.

Size

The size of the gymnasium will depend on the enrollment and the number of physical education

teachers to be used. The minimum size for athletic games should be 110 feet by 110 feet. This will include space for folding bleachers and can be used as two teaching stations of 55 feet by 55 feet each. If desirable, the teaching stations may be separated by folding or movable walls. The clear ceiling height should conform to current requirements of the Georgia High School Association for inter-scholastic competition and should be nc less than 22 feet in any case.

Schools with large enrollments will need additional space for adequate storage, dressing rooms, showers and offices for the teachers of physical education.

Lighting

If the gymnasium is not air conditioned, there should be adequate natural lighting, which is well distributed and controlled.

Windows with tinted glass should be placed 12 feet or more above the floor and arranged, if possible, so that pupils using the basketball back stops during the day will not be looking into the light. Carefully controlled top or monitor lighting is sometimes used effectively. The layout of the play areas and the location of the basketball back stops should be developed before the location of the windows is determined.

There should be no restriction to the amount of fenestration in a gymnasium if the location of the windows does not interfere with the activities, but some type of control should be provided for shading windows on the sunny side of the room. Certain types of glass are available for the diffusion of sun rays. If glass blocks are used, care should be given to avoid high brightness areas. A minimum of 40-foot candles is recommended.

Heating and Ventilation

Provision should be made for operating the window sash for ventilation. If mechanical operation is provided, care should be taken to locate the operating devices at a height or in a location where they will not become a hazard to players or spectators. Adequate mechanical heating and ventilation are musts.

Protection of Window Glass and Light Fixtures

If windows are located where they may be broken by game activities in the gymnasium, they should be protected by a heavy wire guard to prevent glass breakage. The lighting fixtures and thermostats should also be protected by appropriate guards.

Floors

Gymnasium floors should be resilient and non-slippery. Lines outlining the game areas and courts should be painted on the floors before the finish coat is applied (official national standards or state requirements should be followed).

Hardwood floors (rock maple, if possible) laid over a subfloor supported by sleepers is still the best gymnasium floor for general use.

Wood floors should be laid in such a way as to provide subfloor ventilation. Space should be allowed at all walls for expansion and contraction. A three-inch by five-inch steel angle attached to the wall only, will cover the joint and form a sound base that will protect the walls from damage from the heavy iron bases on gymnasium apparatus. Floors and sleepers should be pressure treated to prevent damage by termites and dry rot.

Walls and Ceilings

The gymnasium walls, for a height of at least six feet, eight inches, should be matte glazed tile or other non-abrasive material with all corners rounded. Above the glazed walls, cinder block, common brick or similar unplastered masonry construction may be used. Acoustical treatment designed to withstand shock is a necessity.

Spectator Seating

The seating capacity of the bleachers will be a factor to be determined by local conditions, but a word of restraint is offered. The full occupancy of bleacher seats in most gymnasiums occurs so seldom that the cost of providing these facilities must be given careful consideration.

Both the original cost of building large seating areas and the seating maintenance cost should be considered. Folding movable bleachers will usually provide sufficient spectator space and allow added physical education space.

Instructor's Office

An office should be provided for instructors of each sex. A lavatory, toilet and shower are essential parts of this office. The offices should be located in the proximity of the gymnasium and locker rooms. The extent of the office facilities will depend on the size of the school and the number of instructors.

If the gymnasium and locker room are not on the same level, offices should be near the dressing room. The schematic diagram located in Appendix "C" illustrates the ideal location of the instructors' offices in reference to the gymnasium areas.

Equipment and Apparatus Rooms

It is essential that storage space be planned in terms of the equipment that must be stored. Equipment and apparatus rooms should be located near the instructor's office. Storage spaces should not be less than a total of 1,000 square feet. Double doors should be installed for ease in moving large equipment in and out, and an outside entrance should be provided for convenience in storage of outdoor apparatus. If two separate gymnasiums are included in the school plans, the apparatus room should be located so that it is convenient to both, or two such rooms should be provided.

Gymnasium Shower and Dressing Facilities

Physical education dressing rooms should be separate from athletic dressing rooms. Separate dressing rooms will eliminate many problems arising from the dual use of these facilities. If separation is not possible, provision for the security of personal belongings must be made.

The dressing and locker rooms should be large enough to accommodate the maximum number of students that will dress at any one time. All facilities should be planned with this idea in mind. It is impractical to teach physical education in an unhealthy environment; therefore, it is the responsibility of the administrator, physical educator and maintenance staff to provide for a high degree of sanitation at all times.

Rustproof, sturdy benches should be provided for students in the dressing rooms.

There are three general rooms usually associated with the shower facilities of the gymnasium. These are the shower room, the drying room and the dressing room, which usually contains lockers.

Shower Rooms

Showers can be located to provide use by physical education classes and by other groups after the school day. If doors leading from the physical education dressing room can be locked, many problems can be solved.

The shower room should be located convenient to drying and dressing rooms but should not open directly into the dressing room.

The shower room should be separated from the dressing room by a permanent wall and have a minimum ceiling height of eight feet.

Based on the peak load, provision should be made for one shower head per three students for stall showers or one head per three to five students for gang showers. Allow 16 to 26 square feet of floor area per shower head. Gang type showers require less space.

The floor should slope to drains. Cove bases in these areas are required. Mats should not be used on shower floors. Tile on concrete has proved satisfactory. Small squares of ceramic tile or carborundum in concrete or quarry tile can be used to prevent one from slipping. Frequent washing of the floor with sodium hypochloride is recommended.

Waterproof walls are essential. Glazed tile, ceramic tile, enameled brick or epoxy finished walls have proved most satisfactory. Soap containers must be recessed in the wall. Rough plaster finish definitely is not acceptable. Painting of the walls should be avoided if possible. Polyester epoxy or acrylic epoxy finishes should be used when painting is necessary.

The ceiling should be of waterproof materials or painted with light colored waterproof paint.

Provision for heating, ventilating, air conditioning and lighting must comply with appropriate sections of *A Guide for Planning and Construction of Public Schools in Georgia.*

Generally, windows should be avoided in the shower room to prevent drafts and condensation problems.

Although community mores may mandate otherwise, gang type showers are recommended. Showers serving middle school and high school students should have individual water control fittings, while supervised group control fittings should be provided for use by younger children.

All shower heads should be the ball and socket type mounted from five feet to five feet, nine inches from floor, depending on the size of the students. Fittings must be of rustproof materials and of durable construction.

Provision must be made for adequate water pressure, water heating and hot water storage to serve shower rooms and other fixtures within the facility.

Drying Room

The location of the drying room should be between the shower and dressing rooms. The recommended minimum size is 10 feet by 10 feet. A drying room 10 feet by 20 feet will accommodate approximately 100 pupils.

The walls and ceiling should be light colored and of waterproof construction. Lighting, heating, ventilating and/or air conditioning should generally conform to requirements of the appropriate

sections of *A Guide for Planning and Construction of Public Schools in Georgia.* Temperature should be kept at about 72 degrees F. It is essential that there be no draft.

Artificial light is satisfactory at the level required in lighting standards. Light fixtures should be both shockproof and tamper proof.

Floor should be same as shower and slope to drain.

Accessories needed include hooks for towels.

Physical Education Dressing Room — Locker Room

Factors to be considered in the design of the dressing-locker room are the number of students to be using the facility at a given time, the grade level involved, type of uniform to be used and the relationship of these spaces to the shower rooms, drying rooms, toilet facilities and outdoor recreational areas.

The dressing-locker room should be screened from public areas but convenient to related outdoor areas, shower rooms and drying areas. Dressing rooms should not be connected directly to shower rooms.

Sizing should be based upon at least 12 square feet per student that is anticipated to be using the facility during peak load periods, exclusive of space occupied by lockers. Ten feet, six inches should be considered a minimum ceiling height for this area.

Lockers to accommodate the largest class group anticipated should be provided. Clear aisle space between benches and lockers should be at least 18 inches. The aisle between benches should be at least 20 inches. Consideration may also be given to a combination locker base and bench. Allow about 18 inches of linear bench space per student served. Benches should be constructed of nonrusting materials. Bench height should range from 12 inches to 18 inches according to age of student served.

Family or gymnasium type box lockers are recommended over basket type lockers because they require less space, the initial cost is lower and they generally function better. If the dressing room is to be used only by athletic teams, full length lockers should be utilized. Installation on a raised base is recommended for all types, and lockers should be firmly anchored to wall or base. Some means of ventilating lockers should be provided.

Floor slabs should slope slightly to drains. Finished floors should be of ceramic tile, abrasive surface quarry tile or concrete, appropriately sealed and treated to prevent slipping. A cove base in these areas is required.

Walls and ceilings should be light in color and have waterproof finish. Bright colors may be utilized in the lockers, graphics or accent areas.

Lighting, heating, ventilating and air conditioning must meet standards set forth in other sections of *A Guide for Planning and Construction of Public Schools in Georgia.* Drafts must be avoided, and temperature should be kept between 70 and 75 degrees F.

Glazing with diffused or obscure glass of any windows in this area is required.

Drinking fountain, toilet and washroom facilities in this area shall conform to the requirements established by the Georgia Department of Human Resources contained in the section entitled "School Sanitation Design Criteria."

Team Dressing Room and Lockers

Where schools participate in athletic contests with other schools, it is essential to have a separate dressing room for the athletic teams, in addition to the physical education dressing rooms. When visiting teams come for games, they can use the team room while the home team uses the physical education dressing room. These may be constructed adjacent to each other with some common toilets and showers.

Miscellaneous Items

Ample mirrors should be provided in dressing rooms. Stainless steel mirrors have proved most satisfactory, but if they are not used, shatterproof glass is required.

The use of liquid soap is recommended over the cake or powder form for both economy and convenience.

Footbaths are generally not recommended, but if they are used, they should not be recessed into the floor.

Water closets or urinals should never be located in the shower or drying areas, and separate toilet facilities should be provided for public use.

Consideration should be given to providing space for a towel room, supply room and laundry room with budget and anticipated usage being determining factors. Doors to the rooms to be used by visiting teams should be equipped with locks.

Sheltered Areas

In addition to gymnasium and multi-purpose rooms, consideration should be given to providing limited shelters for physical education at the elementary and secondary school level. Such a space, characteristic of physical education at its best, not only affords protection from climatic extremes, but also captures and utilizes the desirable elements of the natural environment and creates a stimulating backdrop for physical education activities.

SCHOOL POOL REQUIREMENTS – THE ELEMENTARY SCHOOL

All students should learn to swim and should learn to swim before they enter high school. Provisions should be made to offer swimming to elementary school students if community facilities are not available, facilities should be provided by the school. With careful planning and scheduling, one school swimming pool could serve a high school and the middle and elementary schools feeding the high school, insuring full use of the facility.

For several reasons, it appears logical for the elementary school to serve as the setting for a swimming facility – from the standpoint of learning readiness, attitude development and enrichment of the physical education program.

A shallow, constant-depth pool would serve the primary function of teaching swimming strokes. A depth of 36 inches would be satisfactory for all persons, including adults whose overall height is 44 inches or greater. Analysis of children's height indicates that 90 percent of all children age six or more will fall in this height category.

Space Requirements for Pool

25 by 50 feet or 20 by 40 feet

Water depth – three to three and a half feet

Surrounding decks – six feet on one side and one end; three feet on other side and end

Ceiling height – seven feet minimum

Traffic Flow

Participant traffic should flow inside hall or outside door to locker room to toilets to drying room to showers to suit room to pool. Whenever possible, students in wet suits should be separated from the ones in dry clothing.

Climate

Water temperature – 72 to 85 degrees F.

Air temperature – 75 degrees

Pool Basin and Deck Characteristics; Water Filtration and Purification

Equipment should follow local building codes and standards as established by local authorities.

For more complete information on planning of indoor facilities, the following publication will be an excellent guide.

"Planning Areas and Facilities for Health, Physical Education, and Recreation." American Association for Health, Physical Education, and Recreation, 1201 Sixteenth, N.W., Washington, D.C. 20036

PLANNING OR OUTDOOR HARD SURFACE AREAS

The hard surface area to be used for physical education should be planned to accommodate many types of games and sports. Some for consideration are tennis, basketball, volleyball, badminton and tetherball.

Location

The area should be near enough to the school proper to be convenient, but should be far enough away so as not to present problems for quieter areas. The area should be located on an elevation so that proper drainage can take place and so materials and debris will not be washed onto the court.

Surface

Many commercial surfaces can be purchased that will be adequate. The most economical will be of the type material used in surfacing parking areas; new schools usually finish the hard surface area at the same time the parking areas are paved.

Border

A concrete curbing usually surrounds the outdoor playing surface. Posts for the fence and drains may be installed when curbing is poured.

Drainage

There should be a slight crown on the surface for proper drainage. Proper drainage away from these paved areas must also be provided.

Enclosure

The area should be enclosed in a chain link fence from 10 to 16 feet high. The fence connection at the base should be arranged so tennis balls cannot go under the fence. The gates should be hung to swing out from the playing area.

Placing of Net Hangers

Bases that will support the standards for volleyball, badminton and tennis nets must be placed in their foundation before concrete surfaces are poured. If surfaces are of asphalt, compacted clay or soil asphalt mixtures, base should be placed in concrete after surfaces are placed. Standards of galvanized steel pipe welded to heavy wheels with inflated tires may be used without permanent bases.

Basketball Goals

Basketball goals should be set in before the pouring of the surface and should be placed either three or four feet away from the fence. If surface is other than concrete, the setting of basketball goals should be performed similarly to that described for net standards in the preceding paragraph.

Bankboards

Bankboards are needed for practice of strokes and service in tennis. Such an area can also be used for skill tests in some of the other activities and should be placed so that students using it will not interfere with play in the other areas. If possible, one high permanent wall should be constructed.

Marking of Area

For best results, paint for lines should be weather and abrasion resistant. White lines for tennis, blue for volleyball, red for badminton and yellow for basketball should be used.

Maintenance of Area

The area should be swept periodically, and proper upkeep of the lines, nets, bankboards, etc. should be exercised. A diagram for hard surface areas is located in appendix D.

PLANNING OF OUTDOOR GRASS AREAS

The physical education staff, department head, system coordinator and state consultant should help in the planning of outdoor grass areas for all new schools, and administrators should seek their assistance when the need arises. Much consideration must be given to the grass area when land is acquired for the school.

If enlargement of the school is included in long-range plans, allowance for the enlargement should be made at the time of land purchase. Because of frequent lack in planning, many schools have been enlarged at the expense of the outdoor play area.

This guide will not attempt to cover all of the minute details concerned with planning or outdoor areas, but will again refer the reader to

"Planning Areas and Facilities for Health, Physical Education and Recreation." American Association for Health, Physical Education, and Recreation, 1201 Sixteenth Street, N.W., Washington, D.C. 20036

AFFIRMATIVE ACTION IN PREVENTING LITIGATION DUE TO FACILITY AND EQUIPMENT INVOLVEMENT

Policy Formulation

Policies should be formulated concerning purchase, maintenance and major repair of equipment and facilities. These policies should include statements relating to the responsibility for maintenance, repair and purchase of equipment. Provisions for periodic inspections and records of the inspections should be spelled out in the policies. The inspection record should include items such as name of inspector, date of the inspection, condition of the equipment or facility, recommendations for maintenance or repair and the date and type of repairs made.

No activity utilizing defective equipment should be attempted, and restrictive written notices should be displayed and published.

Rules and regulations should be posted and published regarding locker rooms, training rooms, showers, swimming pools, apparatus rooms, ropes, ladders, trampolines, parallel bars, springboards, pitching machines, track and field areas, tackling apparatus and blocking sleds.

Safeguards and Protection

Administrators should provide a safe environment for activity, and officials, police protection, spectator control, medical care and public restrooms should be available. Sideline policies and fire regulations should also be available and/or posted in adequate numbers and amounts to show adequate protection for spectators and participants. Warnings of potential hazards and dangerous situations should be provided. Plans for vehicle movement and prohibition in areas of activity should be clearly specified and posted.

Federal Regulation

§ 86.33 Comparable Facilities of the Rules and Regulations for Title IX of the 1972 Education Amendments state

"A recipient may provide separate toilet, locker room and shower facilities on the basis of sex, but such facilities provided for students of one sex shall be comparable to such facilities provided for students of the other sex.

Local school system administrators should plan facilities in such a way as to not discriminate against individuals on the basis of sex."

See appendix B for citations relating to equipment and facilities.

Appendices

PROPOSAL
FOR
RECREATION PROGRAMS UTILIZING SCHOOL FACILITIES

This information has been compiled to share experiences as to the wise, economical and safe use of school facilities for recreation programs and to suggest other experience-based recreation actions.

Where there is a city and/or county government recreation department in operation, administered by professional recreators the following action is suggested.

- Develop written contracts between the local school board and the policy making body of the recreation department for use of school facilities for recreation purposes.
  - These contracts should fix responsibility for repairs for damage, for electrical, water, custodial and other services.
  - They should assign specific responsibility for use of school facilities, for scheduling, operating, maintaining, supervising and reporting recreation activities in school facilities. (Reports should be made to the school board and the recreation board.)
- The governing officials of a city or county where a governmental recreation service does not exist may enter into a contractual arrangement with another city or county recreation department for the administration of a recreation program. (See Georgia Recreation Enabling Law, Appendix A-5)
- In a community where there is no local recreation department, any city and/or county may (at any official meeting) create a legal recreation commission as the managing authority for establishing a recreation department. Any two or more counties, or any two or more cities or any county and city or combination thereof may jointly establish and conduct a recreation system. (See Georgia Recreation Enabling Law, Appendix A-5)
- Any school board may join with any city or county in conducting and maintaining a recreation system. (See Georgia Recreation Enabling Law, Appendix A-5)

By the creation of a legal recreation commission, school authorities are assured of an official responsible agency of local government to administer the recreation program and to maintain and protect school facilities during use for recreation purposes.

Good leadership is necessary if school resources are to be protected and if quality recreation services are to be provided.

Use of school facilities for recreation purposes can fill many voids due to lack of recreation facilities in many communities. Protection of the educational resources must be basic to their after school use. These suggestions, thus, take into account the need for recreation as well as the need to protect the education resources.

APPENDIX A-2

SUGGESTED ORDINANCE/RESOLUTION

Creating a public Recreation Commission – prescribed terms of members, organization, powers, and duties

BE IT ORDAINED/RESOLVED BY _____

OF THE CITY/COUNTY OF _____

1. Under the provisions of House Bill 794, approved February 1, 1946, there is hereby established a Recreation Commission. This commission shall consist of a minimum of five persons and a maximum of nine persons serving without pay. The terms of office shall be for five years, or until their successors are appointed and qualified, except that the appointing authority, in making initial appointments or in filling vacancies, is hereby authorized and directed to vary the initial terms of members or the terms of persons appointed to fill vacancies in such a manner that thereafter the term of at least one member shall expire annually. Vacancies on such boards occurring other than by expiration of a term shall be filled by the Mayor or presiding officer of the governing body for the unexpired term only.

2. Immediately after their appointment, commission members shall meet and organize by electing a president and other necessary officers. The commission shall have power to adopt bylaws, rules and regulations for the proper conduct of recreation for the (county/city).

3. The Recreation Commission shall provide, conduct and supervise public playgrounds, playfields, indoor recreation centers and other recreation facilities owned or controlled by (county/city). It shall have the power to conduct any form of recreation or cultural activity that will employ the leisure time of the people in a wholesome or constructive manner. It may conduct such activities on properties under its own control, on public properties with the consent of the authorities thereof, and on private properties with the consent of the owner.

4. The Recreation Commission shall have the power to appoint or designate someone to act as superintendent who is trained or properly qualified for the work, and such other personnel as the commission deems proper.

5. Annually, the Recreation Commission shall submit a budget to the governing authority for approval. The commission may also solicit or receive any gifts or bequests of money or other personal property or any donation to be applied, principal or income, for either temporary or permanent use for playgrounds or other recreational purposes.

6. The Recreation Commission shall make an annual report to the governing body and such other reports as may be requested.

7. All ordinances, resolutions or parts thereof in conflict with the provisions and intent of this resolution are hereby repealed.

PASSED AND ADOPTED THIS _____ day of _____ 19_____

_____

ATTEST:

_____

APPENDIX A-3
RECREATION – SCHOOL AGREEMENT

GEORGIA

_____ County AGREEMENT

THIS AGREEMENT, made and entered into this ____ day of _____, 19___, by and between the City and/or County of _____, Georgia and the _____ Board of Education, State of Georgia, herein after called the Board.

WITNESSETH:

WHEREAS, the governing bodies of (city and/or county) and the Board are mutually interested in an adequate program of community recreation under the auspices of (city and/or county) Recreation Department, and

WHEREAS, said governing bodies are authorized to enter into or convenient to aid and cooperate in the cultivation of citizenship by providing for adequate programs of community recreation, and

WHEREAS, (city and/or county) has established by Ordinance or resolution a Recreation Commission responsible for carrying out the purpose of community recreation; and

WHEREAS, in the interest of providing the best service with the least possible expenditure of public funds, full cooperation between (city and/or county) and the Board is necessary.

NOW, THEREFORE, in consideration of the premises, said (city and/or county) and said Board do now agree to cooperate with each other in carrying out the above purposes, and to that end to agree as follows.

1. The Board will make available to (city and/or county) for community recreation activities all school areas which are suitable for community recreation activities. These areas are to be recommended by the Director of Recreation of the (city and/or county) subject to the approval of the City Council and County Commission, superintendent of schools of (city and/or county) and the school board.

2. (City and/or county) will make available to the Board for school events, activities and/or programs all playground areas which are suitable for said events, activities and/or programs. The facilities to be selected by the superintendent of schools, subject to the approval of the director of recreation.

3. The Board agrees to allow (city and/or county) Recreation Commission to use other selected school building facilities which are suitable for community recreation, subject to the approval of the superintendent of schools and the school board.

4. It is hereby agreed that a schedule of dates for the use of the school facilities will be worked out in advance and that this schedule will be arranged to avoid conflict between school and recreation use; that in the scheduling of said facilities, school events and programs shall have first priority, recreation programs, established by the Recreation Department, shall have second priority, and events by other groups or agencies shall have third priority.

5. It is further agreed that a schedule of dates for the use of the recreation facilities will

be worked out in advance and that this schedule will be arranged to avoid conflict between recreation and school use; that in the scheduling of said facilities, recreation department activities shall have first priority, school events and programs shall have second priority, and events by other groups or agencies shall have third priority.

6. The (city and/or county) through its Recreation Department agrees to provide adequate personnel to supervise the recreation activities which take place at the selected areas after school hours and during holiday and vacation periods.

7. It is understood and agreed that the personnel employed by the (city and/or county) of _____ in its Recreation Department shall be under the supervision of the Recreation Department and, further, that the school principals are expected to and will further advise in the planning and administering of a recreation program to be conducted by (city and/or county) on and/or in the facilities under said principal's jurisdiction.

8. It is recognized that school properties and facilities are intended primarily for school purposes and for the benefit of children of school age. It is therefore agreed that, in planning programs and scheduling activities, the recreation needs and opportunities of such children will be well provided for and adequately protected.

9. It is further agreed that in the event of any dispute or differences arising as a result of the recreation program being conducted on the sites jointly used and selected as outlined above or as to use of a Board facility, then, in that event, said dispute or difference shall be settled and arbitrated by an appeal to the respective department heads of (city and/or county) Board in accordance with the established procedures.

10. It is further agreed that the Recreation Department will furnish and supply all expendable materials necessary for carrying on a community recreation program for all ages, under or on the facilities under its supervision.

11. It is further agreed that (city and/or county) may install sprinkler systems, turfing, lighting, physical education equipment, fencing and additional equipment for recreation, not in conflict with school use, on areas selected by the director of recreation, subject to the approval by the superintendent of schools. Any installations of equipment or construction on said premises, for community recreation purposes, shall be at the (city's and/or county's) cost or proportionally shared by the (city and/or county and board), as the respective annual budget appropriations of (city and/or county) and Board specify.

12. It is further agreed that plans and specifications for the placement of all equipment, facilities and permanent improvements upon said premises and the type, design and construction thereof, shall be approved by the Board prior to any installation thereof.

13. It is further agreed that the cost of maintaining said improved areas shall be borne proportionately by the (city and/or county) and the Board as determined by the relative use of said areas; and further, that (city and/or county) and Board agree to maintain such areas in good condition during the periods of their respective responsibility.

14. It is further agreed that any permanent improvements or equipment installed or erected on said premises by (city and/or county) shall remain the property of (city and/or county) and may be removed if permit for use of area is terminated.

15. It is further understood and agreed that either party to this agreement may at any

time terminate this agreement upon giving in writing to either party three months' notice of its intention to terminate same.

16. It is further agreed this agreement nullifies and voids any previous agreements between the Board and (city and/or county) Recreation Commission as apply to _____ School; _____ School; _____ School.

IN WITNESS WHEREOF, and pursuant to the authority granted by duly recorded resolutions, the parties hereto have caused this agreement to be executed on their behalf.

City of _____

By _____
Mayor

ATTEST:

_____
City Clerk

_____

_____ School Board

By _____
Chairman of the Board

ATTEST:

_____
Secretary

_____

County of _____

By _____
Chairman, County Commission

APPENDIX A-4

The Georgia Committee on Children and Youth in Executive Session in Atlanta, Georgia, September 1, 1971, Resolved that:

WHEREAS the Education and Recreation Committees of the Georgia Committee on Children and Youth realize that public school facilities can be an invaluable asset to communities with existing full time recreation programs, and

WHEREAS these facilities can also serve as a nucleus for the establishment of organized part-time or seasonal programs in those communities where full time services do not exist, and

WHEREAS planned and supervised recreation is essential to the mental, physical and social development of all citizens, and

WHEREAS local governing officials, school officials, civic clubs, churches and interested individuals working together in a spirit of cooperative unity can promote well organized and meaningful leisure activities, and

WHEREAS the lives of many Georgians could be made fuller and richer through participation in recreation and park programs, and finally

WHEREAS in many cities and counties public recreation and park facilities are severely limited or non-existent for the conduct of recreation and park activity.

NOW, THEREFORE BE IT RESOLVED that the Georgia Committee on Children and Youth does not recommend to Governor Jimmy Carter and Dr. Jack Nix, State Superintendent of Schools, that they lend support and influence to local Boards of Education in promoting the availability of public school facilities for recreation purposes on a year-round basis under proper supervision and direction by locally responsible sponsoring agencies.

September 1, 1971

_____

Miss Josephine Martin, Chairman

APPENDIX A-5

GENERAL DESCRIPTION OF THE GEORGIA RECREATION ENABLING LAW

The Georgia Recreation Enabling Law, approved February 1, 1946 (Ga. Laws 1946, p. 152), and amended in 1953, 1963, 1964, and 1971, is permissive legislation enacted to serve as an instrument whereby communities can, at their discretion, meet their recreation needs.

This act simply sets forth several steps which a governmental subdivision may take in starting a recreation system. Before implementing any of the following, it is suggested that the Enabling Law be studied carefully and legal advice obtained.

This Law permits:

1. That the governing body of a city or county may establish an organized recreation department under qualified leadership.

2. That by their resolution or ordiance, the governing body may designate a group which will be responsible for the conduct and maintenance of the recreation program and facilities.

3. That the authorized group, usually a recreation commission or board, may accept gifts, money, or property, to be used in the conduct of the recreation program.

4. That the governing authority of any municipality or county may upon its own motion, appropriate public funds for and provide for the establishment, maintenance, and conduct of an organized recreation department.

5. That they may, upon their own motion, extend to the voters opportunity to approve a special "recreation tax" to be used for the operation and maintenance of a recreation program.

6. That a petition signed by at least 10 percent of the qualified and registered voters in a city or county can cause the quest of a special "recreation tax" to be submitted to the voters through referendum.

7. That the governing body of any municipality or county may provide that bonds be issued for the purpose of acquiring lands or buildings for recreation purposes.

8. That any two or more cities and counties may jointly establish and maintain a recreation department.

9. That trained and qualified recreation personnel may be employed for the purpose of administering the recreation program.

Numerous municipalities and counties throughout Georgia have utilized the Enabling Law to good advantage in offering recreation opportunities for their citizens. As increasing leisure presents a greater challenge, municipalities and counties will probably use the law more extensively.

APPENDIX B

Court Cases Involving Equipment and Facilities

Bowman Vs. Union High School District No. 1, 22P. 2d 991, (Wash. 1933).

Bradley Vs. Board of Education of City of Oneonta, 8 N.E. 2d 610 (N. Y. 1937).

Brown Vs. City of Oakland, 124 P. 2d 369 (Cal. 1942).

Dawson Vs. Tulare Union High School, 276 P. 424 (Cal. 1929).

Fruend Vs. Oakland Board of Education of Alameda County, 82 P. 2d 197 (Cal. 1938).

Howard Vs. Tacoma School District No. 10, 152P. 1003 (Cal. 1915).

Huff Vs. Compton City Grammar School District, 267 P. 918 (Cal. 1928).

Judson Vs. Grant Powder Company, 40P. 1020 (Cal. 1885).

Lemak Vs. City of Pittsburg, 23 A. 2d 354 (PA. 1942).

Read Vs. School District No. 211 of Lewis County, 110 P. 2d 179 (Wash. 1941).

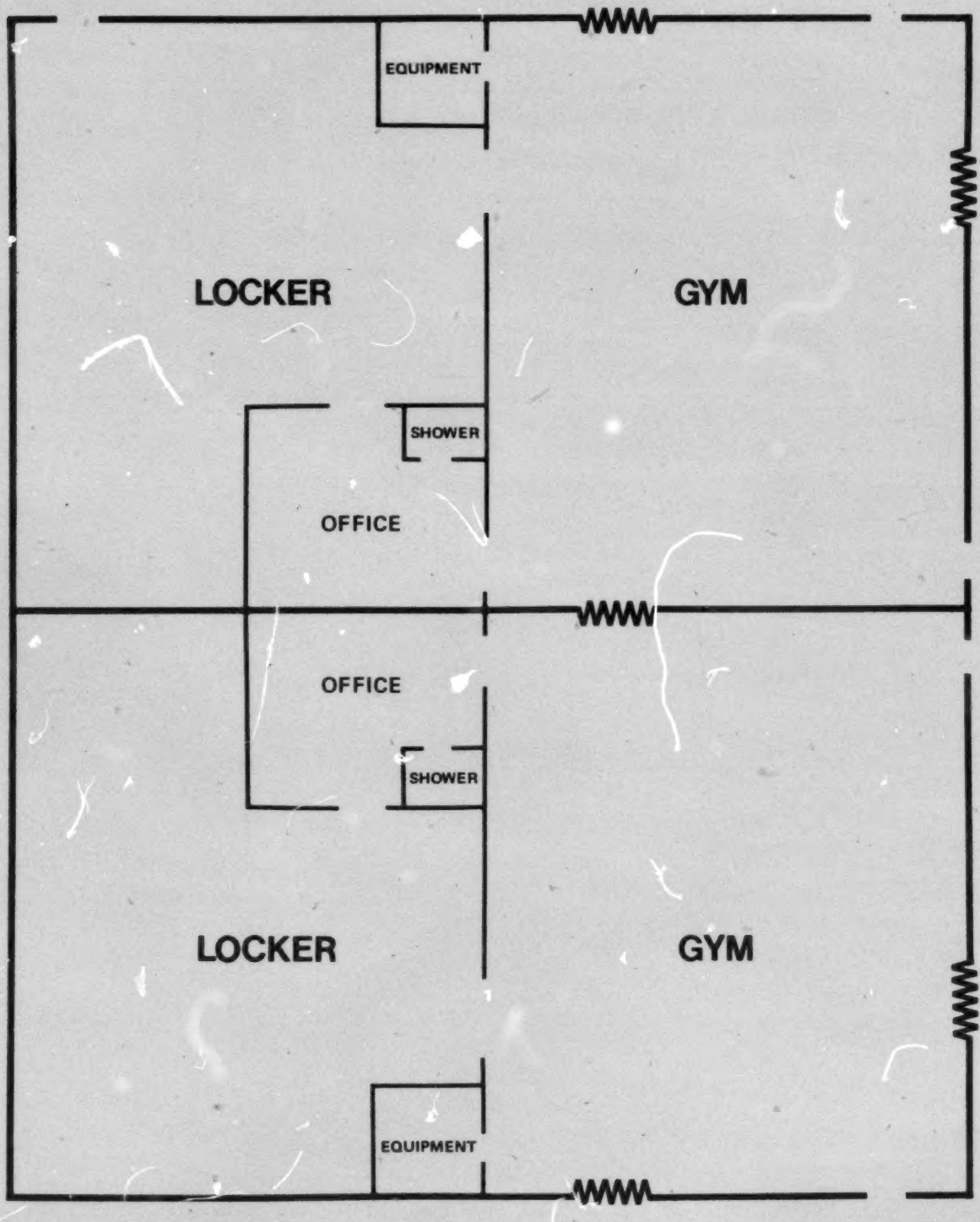
Stovall Vs. Toppenish School District Nr. 49, 188 P. 12 (Wash. 1920).

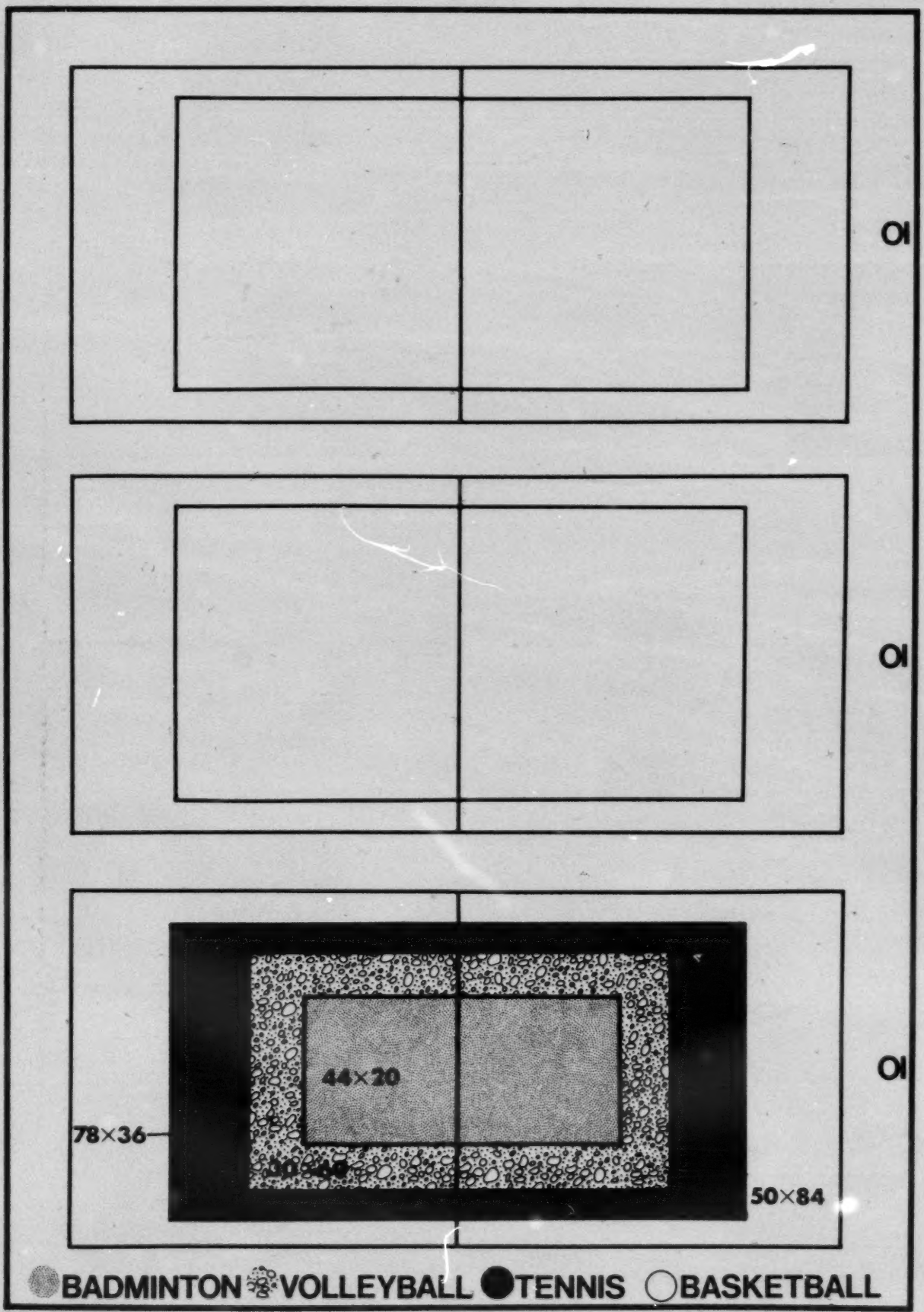
Taylor Vs. Oakland Scavenger Company, 110p. 2d 1044 (Cal. 1941).

Yarnell Vs. Marshall School District No. 343, 135 P. 2d 317 (Wash. 1941).

APPENDIX C

Schematic Diagram Illustrating the Relationship of the Gymnasium Locker Rooms and Instructor's Offices




44×20
78×36
50×84
BADMINTON
VOLLEYBALL
TENNIS
BASKETBALL

APPENDIX E

RESOURCE LIST

Physical Education, Recreation and Athletic Facilities, Equipment and Supplies

A Guide for Planning Facilities for Athletics, Recreation, Physical and Health Education. Athletic Institute, revised 1956, Chicago, Illinois.

A Guide for Planning Physical Education and Athletic Facilities. New Jersey State Department of Education, 225 West State Street, Trenton, New Jersey, 1964.

Bucher, Charles A. *Administration of School and College Health and Physical Education Programs,* 4th ed. St. Louis: The C. V. Mosby Co., 1967.

California State Department of Education. *Planning of Shower, Locker and Dressing Facilities for California Schools.* Sacramento: California State Department of Education, Bulletin No. 53, November, 1956.

College of Physical Education Building and Fields Committee. University of Illinois. *A Study of the Present Status, Future Needs, and Recommended Standards Regarding Space Used for Health, Physical Education and Athletics.* Champaign, Illinois: Stipes Publishing Company, 1960.

College and University Facilities Guide for Health, Physical Education, Recreation and Athletics, AAHPER Publication, 1201 16th Street, Washington, D.C. 20036 (240-07940), cost $7.50.

Conventional Gymnasium Vs. Geodesic Field House, Educational Facilities Laboratories, New York, New York.

Crawford, Wayne H. *A Guide for Planning Indoor Facilities for College Physical Education.* New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Dance Facilities. AAHPER Publication, 1201 16th Street, Washington, D.C. 20036, Copyright 1972.

Dressing Rooms and Related Service Facilities for Physical Education, Athletics and Recreation. AAHPER Publication, 41 pp, 1201 16th Street, N.W., Washington, D. C. 20036, 1972.

Environmental Education/Facility Resources, A report from Educational Facilities Laboratories, 477 Madison Avenue, New York, New York 10022 (July, 1972) cost $2.00.

Environmental Engineering for the School: A Manual of Recommended Practice. Washington, D.C.: U. S. Department of Health, Education and Welfare, 1961.

Every Child a Winner With Improvised Physical Education Equipment. Project Hope, Title III, ESEA, Irwin County Schools, Ocilla, Georgia, 1973.

Finchum, R. N. *Extended Use of School Facilities.* U. S. Department of HEW, Office of Education OE-21035, U. S. Government Printing Office, Washington, D. C. 20402, 1967, cost 70¢.

"Focus on Facilities," *Journal of Health, Physical Education, and Recreation* 33 (April, 1962), pp. 33-48.

Found Spaces and Equipment for Children's Centers, A report from Educational Facilities Laboratories, 477 Madison Avenue, New York, N. Y. 10022 (March, 1972), cost $2.00.

Gabrielson, Alexander M. and Miles, C. M. *Sports and Recreation Facilities for School and Community.* Englewood Cliffs, New York 10022 (March, 1972), cost $2.00.

Grounds for Learning the School Sight as an Educational Resource. AAHPER, Washington, D. C. Slide Tape Presentation, 1973.

How to Plan Your Gym for Favorite Sports Activities. Hillyard Chemical Company, St. Joseph, Missouri, 1954.

Hughes and French. *The Administration of Physical Education.* New York, A. S. Barnes Company, 1954.

Intramural Handbook. Rawlings Sporting Goods Company, Advertising Department, 2300 Delmar, St. Louis, Missouri 63166.

Kohn Sherwood. *The Early Learning Center.* Profiles of Significant Schools – A Report from Education Facilities Laboratories, 477 Madison Avenue, New York, New York 10022 (January, 1970).

Nash, Moench, and Saurborn, *"Physical Education," Organization and Administration.* New York: A. S. Barnes Company, 1951.

National Industrial Recreation Association, *Standard Sports Areas,* Chicago, Illinois, 1956.

New Generation Gyms. In Nations Schools, A McGraw-Hill Publication for School Administration, Vol. 84, No. 6 (December, 1969), p. 41-56.

Nissen, *Gymnasium Planning Kit.* Contact Fred Martinex, Niessen Sports Center, 6400 Hillandale, Lithonia, Georgia 30058 (482-7453).

One Out of Ten, School Planning for the Handicapped. Educational Facilities Laboratories, New York, New York, 1974.

Physical Recreation Facilities, A Report from Educational Facilities Laboratories, 477 Madison Avenue, New York, New York 10022 (April, 1973), cost $3.00.

Planning Areas and Facilities for Health, Physical Education and Recreation, Revised 1974. AAHPER Publication, 1201 16th Street, N. W., Washington, D. C. 20036, 210 pp., looseleaf binding, cost $12.50.

Scott, Harry A. and Westkaemper, Richard B. *From Program to Facilities in Physical Education.* New York: Harper and Brothers, 1958.

Stanley, D. K. *Reference on Facilities and Equipment for Health Education, Physical Education and Recreation.* Washington, D. C., AAHPER, 1958.

Tri-State Institute on Planning and Design of School Swimming Pools, Yale University, 1958.

Tunstall, John H. *Design Factors Relating to the Initial Cost and Function of School Buildings with Emphasis on Shapes for Gymnasiums,* Dissertation, University of Tennessee, 1970.

U. S. Department of Health, Education and Welfare, Office of Education, *Planning Schools for New Media.* Washington, D.C., 1961.

Waite, Lloyd, et al. *Guide for Planning School Plants.* Nashville, Tennessee: National Council on Schoolhouse Construction, 1958.

Williams and Brownell. *The Administration of Health Education and Physical Education.* Philadelphia: W. B. Saunders Company, 1951.

APPENDIX F

BIBLIOGRAPHY FOR INNOVATIVE PLAYGROUNDS

Prepared by: Miss Joyce Lawler

Atlanta Public Schools

Books

Aaron, David and Bonnie P. Winawer. *Child's Play.* New York: Harper and Row, 1965.

Aitken, Margaret H. *Play Environment for Children – Play Space, Improvised Equipment, and Facilities.* Bellingham, Washington: Educational Designs and Consultants, 3259 North Shore Road, 1972.

Association for Childhood Education International. *Housing for Early Childhood Education.* Washington: ACEI, 1968, 1315 Wisconsin Avenue, N. W., 20016.

Bengtsson, Arvid. *Adventure Playgrounds.* New York: Praeger Publishers, Inc., 1972.

Campbell, Ed., editor. *A Small World of Play and Learning.* Durham, N. C.: Linc Press, 1970, 1106 Lamond Avenue, 27701.

Carter, Joel W. *How to Make Athletic Equipment.* New York: The Ronald Press Company, 1970.

Children's Rooms and Play Yards. Menlo Park, California: Lane Magazine and Book Company, 1970.

Corbin, Charles B. *Inexpensive Equipment for Games, Play and Physical Activity.* Dubuque, Iowa: Wm. C. Brown Company Publishers, 1972.

Dattner, Richard. *Design for Play.* New York: Van Nostrand Reinhold Company, 1969.

Educational Facilities Laboratories. *Patterns for Designing Children's Centers.* EFL, 1971. 477 Madison Avenue, New York 10022.

Educational Facilities Laboratories. *Found Spaces and Equipment for Children's Centers.* New York: EFL, 1972.

Farralones Scrapbook: Making Places, Changing Spaces, in Schools, at Home, and Within Ourselves. Random House, Inc., 1971.

Frederick, A. Bruce. *212 Ideas for Making Low-Cost Physical Education Equipment.* Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1963.

Friedberg, M. Paul and Ellen Perry Berkeley. *Play and Interplay,* New York: The MacMillan Company, 1970. 866 Third Avenue, 10022.

Kauffman, Carolyn and Patricia Farrell. *If You Live With Young Children.* New York: G. P. Putnam's Sons, 1957.

Kepler, Hazel. *The Child and His Play: A Planning Guide for Parents and Teachers.* New York: Funk & Wagnalls Co., 1952.

Lady Allen of Hurtwood. *Planning for Play.* Cambridge, Mass.: MIT Press, 1968.

Ledermann, Alfred and Alfred Trachsel. *Creative Playgrounds and Recreation Centers.* New York: Frederick A. Praeger, Inc., 1968.

Matterson, E. M. *Play and Playthings for the Preschool Child.* Baltimore: Penguin Books, 1968.

Miller, Peggy L. *Creative Outdoor Play Areas.* Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1972.

National Association for the Education of Young Children. *Let's Play Outdoors.* Washington: NAEYC, 1966. 1834 Connecticut Avenue, N. W., 20009.

National Association for the Education of Young Children. *Play and Playgrounds.* Washington: NAEYC, 1971.

National Association for the Education of Young Children. *Planning Environments for Young Children: Physical Space.* Washington: NAEYC, 1969.

Project HOPE, Title III. *Every Child A Winner with Improvised Physical Education Equipment.* Ocilla, Ga.: Irwin County Schools, 1973.

Articles, Booklets and Pamphlets

Advisory for Open Education. "Building a Playground." Early Childhood Education Study, Cambridge, Massachusetts, 1970.

American Association for Health, Physical Education and Recreation. "Physical Education '73." Reprinted from *Instructor,* January, 1973. Stock # 245-25468.

Association for Childhood Education International. "Bits and Pieces: Imaginative Uses for Children's Learning." ACEI, 3615 Wisconsin Avenue, N. W., Washington 20016. 20-A, 1967.

Belka, David. *"Improving a* Primary Playground." *Journal of Health, Physical Education and Recreation,* January, 1973, page 72.

Etkes, Asner B. "Therapeutic Playgrounds." *Journal of HPER,* November-December, 1973, pp. 56-57.

Grey, Alexander. *"Creative Learning in Children's Playgrounds." Childhood Education,* May, 1969, pp. 491-99.

Hanson, Robert F. "Playgrounds Designed for Adventure." *Journal of HPER,* May, 1969, pp. 34-36.

Movement Education Newsletter. Subscriptions are $3.00 per year. Write for subscription and back issues to 777 South Esplanade Street, Orange, California 92667.

Physical Education Competence Center. "Innovative Playground Equipment for Elementary Schools." Physical Education Competence Center, Title III; P. O. Box 670, Ocala, Florida 32670.

Pitts, Mabel B. "Tires Are Tolls for Learning." Social Services Division, State Department of Public Welfare, John H. Reagan Building, Austin, Texas 78701.

Rekstad, Mary E., James Miller and Edwin Lanehart. "Promising Practices in Elementary School Physical Education." *Journal of HPER,* January, 1969, pp. 36-41.

Seker, Jo Ann. "A Scavenger Playground." *Journal of HPER,* May, 1971, p. 53.

Woody, Jack. "We Tried New Types of Playground Equipment." Parks and Recreation Section, *The American City,* February, 1970, p. 22.

"Games People Make." *Better Homes and Gardens,* January, 1974, pp. 56, 59.

"Houses Perfect for Child's Play." *Southern Living,* May, 1969, pp. 74-80.

"Recycled Playground Helps Fire Children's Imaginations." *Grit,* May 13, 1973, p. 2.

Yates, Tommye C. "Innovative Playground Equipment for Movement Education." Lookout Region Shared Services, P. O. Box 29, LaFayette, Georgia 30728.

Evaluation Form

The Georgia Department of Education would like your evaluation of this publication. Would you take a few moments to fill in and mail this self-addressed, pre-stamped form? Thank you.

1. Name of publication .....

2. How do you use this publication?

3. Based on your own experience, do you rate this publication

☐ very good ☐ good ☐ fair ☐ poor ☐ very poor

4. Did you find the material:

	Yes	No
Easy to read and understand?	☐	☐
Organized for convenient use?	☐	☐
Attractive?	☐	☐
Complete?	☐	☐

5. Other comments.

6. Your job title (teacher, curriculum director, principal, etc.) .....

7. Signature and address (optional).

.....

.....

.....

8. Date .....